

## PART V

## CROPS

Major Crops

Only a few crops are very important in Stevens County. Principal crops in the county are hay and small grains. The dominance of feed crops in the area is related to the important livestock and dairy industries. Also, the relatively short growing season of the county limits the crops that can be grown on a commercial scale to the more hardier plants. Harvested cropland in Stevens County amounted to 98,939 acres in 1959. Most of the county's crops rely strictly on nature for water as only about 7 percent of harvested cropland was reported irrigated in 1959.

In 1962, more acreage of alfalfa hay was grown in Stevens County than any other single crop. Stevens ranked second in the state in alfalfa acreage in 1962 with 53,600. Second ranking crop in the county in terms of acreage was wheat. Nearly 12,000 acres of wheat were harvested in 1962. Oats, barley and clover-timothy hay followed in order of acreage among the more important crops of the county.

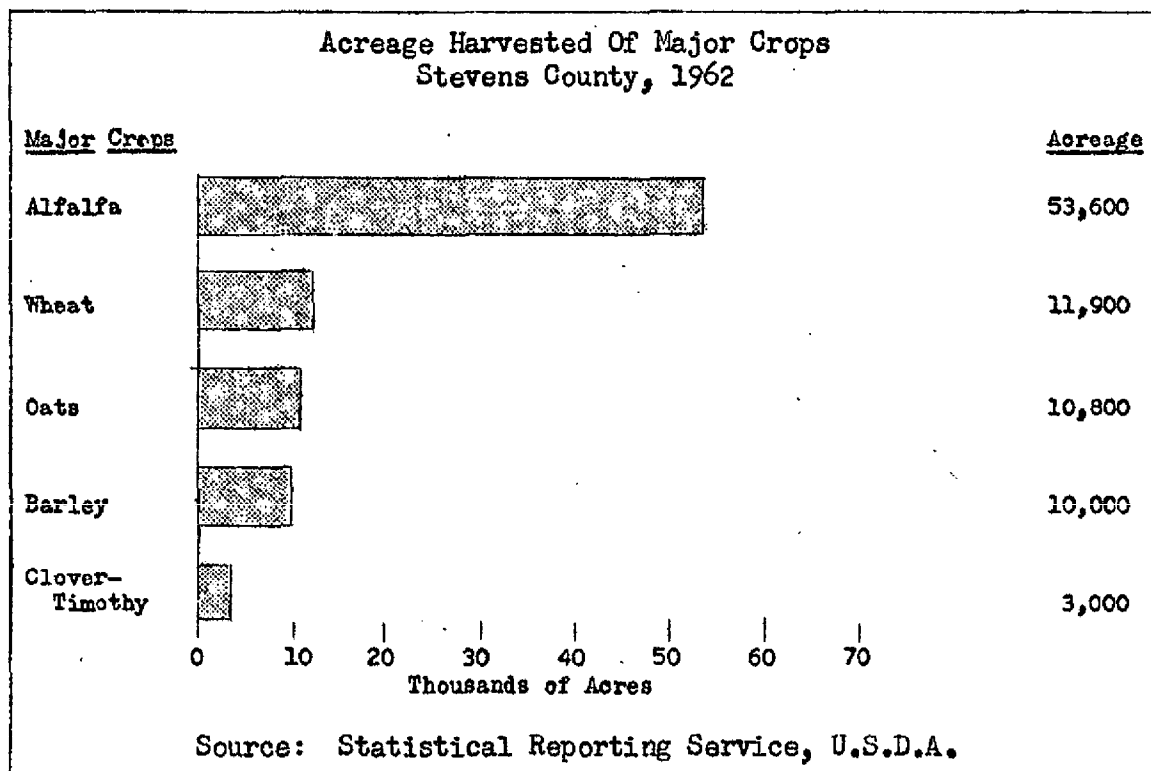


Figure 11. Major Crop Acreages, Stevens County, 1962.

Crop Trends

A number of trends are apparent in the acreages Stevens County farmers have planted to leading crops. These changes are part of an increasing emphasis in the area's livestock farming and expansion of dairying. The trend also shows the influence of mechanization in agriculture and the resulting decrease in number of work animals.

Stevens County agriculture through crop specialization and intensification has become increasingly more valuable to the regional economy. The area has continued to specialize in hays and small grains although the acreages of some of these crops have decreased over the years. Other crops such as potatoes and field corn have declined in local importance.

### Hay Crops

For many years the most important crop in Stevens County from the acreage standpoint has been hay. About 62 percent of the county's harvested cropland was devoted to this crop in 1959. Land from which hay was cut amounted to 61,448 acres in that year.

Table 14. Alfalfa Hay and Clover-Timothy Hay  
Acreage, Yield and Production  
Stevens County, 1939-1962

Year	Alfalfa Hay			Clover and Timothy Hay		
	Harvested Acres	Yield (Tons Per Acre)	Production (Tons)	Harvested Acres	Yield (Tons Per Acre)	Production (Tons)
1939	42,600	1.3	59,700	6,100	1.5	9,200
1940	45,700	1.8	80,000	5,800	1.4	8,300
1941	50,000	2.1	105,000	5,500	1.4	7,800
1942	48,600	2.3	112,000	6,200	1.6	10,200
1943	50,600	1.7	86,000	5,900	1.3	7,900
1944	51,600	1.5	77,400	5,900	1.6	9,700
1945	50,300	1.6	81,500	5,700	1.6	8,900
1946	48,200	1.6	77,400	5,000	1.7	8,300
1947	44,200	1.6	71,700	4,800	1.7	8,200
1948	44,500	1.8	79,100	4,600	1.8	8,100
1949	46,400	1.5	69,200	4,700	1.5	7,100
1950	44,900	1.2	53,900	4,500	1.7	7,600
1951	49,300	1.3	64,500	4,700	1.3	6,100
1952	50,300	1.9	96,000	4,100	1.8	7,300
1953	53,400	2.0	108,800	1,530	2.9	4,400
1954	53,100	1.7	90,500	1,240	2.0	2,500
1955	53,900	1.9	103,100	4,050	1.7	6,900
1956	52,500	1.5	78,800	5,100	2.2	11,200
1957	50,900	1.9	97,700	4,100	2.2	9,000
1958	48,200	2.0	96,400	3,700	1.6	5,900
1959	49,400	1.8	88,900	3,400	1.9	6,400
1960	49,000	1.4	68,600	3,400	1.6	5,400
1961	51,000	1.8	89,800	3,100	2.1	6,500
1962	53,600	1.9	99,700	3,000	1.5	4,400

Source: Statistical Reporting Service, U.S.D.A.

The most prominent single crop in the county is alfalfa hay. Alfalfa in Stevens County has increased from 42,600 acres in 1939 to 53,600 in 1962 with some acreage fluctuations during the intervening years. A peak acreage of 53,900 acres was reached in 1955. In 1962, Stevens County ranked second in the state in alfalfa acreage from which 99,700 tons of hay were harvested. Yields have been

relatively good from the county's nonirrigated acreages because sufficient ground moisture (sub-irrigation) has been available for alfalfa and other deep-rooted crops.

In 1959, over 80 percent of Stevens County farms reported growing alfalfa. Most dairy and beef cattle farms grow their own alfalfa. The bulk of the crop is used on the farm where grown but a few farmers produce it for the commercial market. Around 350 of the total 1,294 farms which grew alfalfa in 1959 reported sales of this hay off the farm. About 15 percent of the harvested tonnage was sold during the year.

Stevens County's main alfalfa acreages are located in the Colville Valley from the vicinity of Colville to Springdale. Other alfalfa areas include the benchlands adjacent to Franklin D. Roosevelt Lake, the Kettle River Valley and the Columbia River and its tributary lowlands in the northern part of the county particularly in the Deep Creek area southeast of Northport.

Other hay crops grown in the county are minor in comparison with alfalfa. In 1962, there were 3,000 acres of clover-timothy from which 4,400 tons of hay were harvested. Both acreage and production have greatly declined in the county since 1939. A low of 1,240 acres was reached in 1954 but by 1956, clover-timothy acreage was up above 5,000. Since 1956, however, acreage devoted to clover-timothy has been on a downward trend. Most of the clover-timothy is consumed on farms where grown with only a small percentage sold off the farms annually. Clover-timothy hay is not as well-suited to Stevens County's climate as it is to western Washington's humid summers. A concentration of clover-timothy acreage is located in the Deep Creek area in the northeastern part of the county. Scattered acreages are also found in the Colville Valley, in the areas bordering Franklin D. Roosevelt Lake and in the southeastern portion of the county.

Silage cut from alfalfa, grass and grain is increasingly important in Stevens County. In 1954, the county's farmers put up 9,334 tons of silage compared with 16,746 tons in 1959. The acreage cut increased from 918 to 3,165 in the five-year period. Farmers have found that cutting hay fields for silage furnishes a high quality, succulent feed and reduces feed losses caused by occasional wet weather during hay harvesting. Silage is used mostly for feeding dairy cattle, especially during the winter months. Grass silage production is distributed over most of agricultural areas of the county.

Green cutting of small grains (oats, wheat, barley and rye) for hay in the county has declined from 8,650 tons in 1949 to 5,100 in 1954 and 4,862 in 1959. In 1959, about 3,750 acres of small grains were harvested for hay. Wild hay production has also been going down in recent years. Wild hay was cut from 1,124 acres in 1959 compared with 1,616 in 1954 and 2,995 in 1949. Other hays including vetch were cut from a total of 1,524 acres in 1959, an increase from the 1,466 acres in 1954. Production increased from 2,455 tons in 1954 to 2,538 tons in 1959.

#### Small Grains: Wheat, Oats, Barley and Rye

As a group, small grains constitutes the second most important crop in Stevens County in terms of acreage. According to the Census of Agriculture in 1959, nearly 37,000 acres were devoted to wheat, oats, barley and rye which represented about 37 percent of the county's total harvested cropland. In 1962, the total acreage of these small grains amounted to 32,800 acres.

Table 15. Winter Wheat and Spring Wheat  
Stevens County, 1939-1962

Year	Winter Wheat			Spring Wheat		
	Harvested Acres	Yield (Bushels Per Acre)	Production (Bushels)	Harvested Acres	Yield (Bushels Per Acre)	Production (Bushels)
1939	10,500	21.8	229,100	7,000	16.3	114,200
1940	10,000	19.0	190,000	7,000	16.1	112,600
1941	12,000	21.5	257,700	3,000	16.1	48,300
1942	8,600	25.1	215,600	3,000	19.0	57,000
1943	7,800	26.0	203,000	10,400	17.0	176,800
1944	6,960	28.5	198,500	7,630	19.2	146,500
1945	9,300	28.5	265,000	5,800	19.1	111,000
1946	10,400	29.5	306,800	7,500	20.0	150,000
1947	9,200	23.5	216,000	10,100	18.0	181,800
1948	11,600	27.1	314,400	8,400	16.0	134,000
1949	13,500	20.0	270,000	11,300	15.5	175,200
1950	13,500	31.8	429,300	6,000	20.5	123,000
1951	12,600	22.0	277,200	8,300	16.0	132,800
1952	17,400	21.0	365,400	5,900	18.0	106,200
1953	18,500	31.5	582,750	7,400	22.0	162,800
1954	10,500	36.0	378,000	7,200	21.5	154,800
1955	10,400	35.0	364,000	7,400	21.0	155,400
1956	6,700	33.0	221,100	9,800	33.0	323,400
1957	8,200	42.0	344,400	8,800	33.0	290,400
1958	10,700	43.0	460,100	6,600	15.0	99,000
1959	11,200	40.5	453,600	5,500	25.0	137,500
1960	11,800	33.5	395,300	3,600	13.5	48,600
1961	13,500	33.0	445,500	2,200	24.5	53,900
1962	10,500	42.0	441,000	1,400	26.0	36,400

Source: Statistical Reporting Service, U.S.D.A.

## Wheat

As an individual crop, wheat ranked second in the county in terms of acreage in 1962. Since 1939, total wheat acreage has fluctuated between a low of 11,600 in 1942 and a high of 25,900 in 1953. Wheat acreage has dropped over 50 percent since 1953 to 11,900 acres in 1962. The 1962 total acreage was composed of 88 percent winter wheat and 12 percent spring wheat. Winter wheat acreage has remained relatively more stable over the years than has spring wheat.

Stevens County's wheat yields generally have increased over the years since 1939. About 19 bushels per acre were harvested in 1939 compared with over 40 bushels in 1962. Winter wheat yields have consistently been higher than those for spring wheat. In 1962, total wheat production in Stevens County amounted to 477,400 bushels consisting of 441,000 bushels of winter wheat and 1,400 bushels of spring wheat.

Numerous varieties of wheat are grown in Stevens County. In 1962, 68 percent of the wheat production was composed of the Common White variety while the rest were of the White Club class. Winter wheat varieties are preferred because of higher yields.

Table 16. Varieties of Wheat Grown  
in Stevens County, 1962

Classes and Varieties of Wheat	Production (Bushels)	Percent of Total Crop
<u>White Club Wheats (winter)</u>		
Elmar	83,600	17.5
Omar	68,600	14.4
<u>Common White Wheats (winter)</u>		
Burt	194,900	40.8
Brevor	92,800	19.5
Gaines	1,100	.2
<u>Common White Wheats (spring)</u>		
Idaed	20,000	4.2
Marfed	16,400	3.4
Total all classes and varieties	477,400	100.0

Source: Statistical Reporting Service, U.S.D.A.

Table 17. Wheat and Oats: Acreage, Yield and Production  
Stevens County, 1939-1962

Year	All Wheat			Oats		
	Harvested Acres	Yield (bushels per acre)	Production (bushels)	Harvested Acres	Yield (bushels per acre)	Production (bushels)
1939	17,500	19.6	343,300	8,500	39.0	331,500
1940	17,000	17.8	302,600	8,300	32.5	269,900
1941	15,000	20.4	306,000	8,000	40.5	324,000
1942	11,600	23.5	272,600	9,100	46.0	418,600
1943	18,200	20.9	379,800	9,300	41.0	381,300
1944	14,590	23.6	345,000	8,800	41.5	365,200
1945	15,100	24.9	376,000	10,200	39.0	397,800
1946	17,900	25.5	456,800	8,000	47.0	376,000
1947	19,300	20.6	397,800	8,200	56.0	459,100
1948	20,000	22.4	448,400	11,900	37.0	440,300
1949	24,800	18.0	445,200	12,100	31.5	381,000
1950	19,500	28.3	552,300	12,500	49.0	612,700
1951	20,900	19.6	410,000	10,800	36.5	394,200
1952	23,300	20.2	271,600	10,400	43.0	447,200
1953	25,900	28.8	745,550	10,600	45.0	477,000
1954	17,700	30.1	532,800	12,900	40.5	522,600
1955	17,800	29.2	519,400	10,300	47.0	484,100
1956	16,500	33.0	544,500	8,400	45.0	378,000
1957	17,000	37.3	634,800	11,000	38.0	418,000
1958	17,300	32.3	559,100	10,600	38.0	402,800
1959	16,700	35.4	591,100	11,100	41.0	455,100
1960	15,400	28.8	443,900	7,600	33.0	250,800
1961	15,700	31.8	499,400	8,200	49.0	401,800
1962	11,900	40.1	477,400	10,800	41.5	448,200

Source: Statistical Reporting Service, U.S.D.A.

In 1959, 392 Stevens County farms reported growing winter wheat while 292 were enumerated as having spring wheat. The main producing region is the Colville Valley from Marcus to Springdale. The second most important wheat area is situated on the benchlands along the banks of Roosevelt Reservoir centered on Hunters.

### Oats

Oats are the second most important of the grain crops in Stevens County. Acreage has ranged between 8,000 to 12,900 since 1939. In 1962, 448,200 bushels were harvested from 10,800 acres which placed Stevens County third in oat production and fourth in acreage among the 39 counties of the state. Most of the oats are threshed and consumed locally as livestock feed. Some are sold off the farm into the commercial markets.

In 1959, 482 farms reported growing oats within Stevens County. Acreage is located primarily in the Colville Valley, the Marcus Flats and valleys in the northeastern and southeastern sections of the county.

Table 18. Barley and Rye: Acreage, Yield and Production  
Stevens County, 1939-1962

Year	Barley			Rye		
	Harvested Acres	Yield (bushels per acre)	Production (bushels)	Harvested Acres	Yield (bushels per acre)	Production (bushels)
1939	1,830	25.0	45,800	1,160	15.5	18,000
1940	2,550	20.0	50,900	760	23.2	17,600
1941	3,080	34.0	104,700	920	10.8	9,900
1942	4,900	31.0	151,900	850	18.0	15,300
1943	7,000	31.0	217,000	680	10.0	6,800
1944	4,800	28.0	134,500	590	16.1	9,500
1945	4,090	27.5	112,500	400	14.5	5,800
1946	4,390	27.0	118,500	440	15.6	6,880
1947	7,000	43.0	301,100	1,040	13.2	13,700
1948	7,500	39.0	292,500	800	15.0	12,000
1949	6,300	26.0	163,800	340	10.4	3,560
1950	8,600	35.5	305,400	310	23.0	7,130
1951	5,600	33.0	184,800	270	15.0	4,050
1952	4,200	38.0	159,600	320	9.5	3,040
1953	5,500	35.0	192,500	400	18.5	7,400
1954	9,300	34.5	320,800	480	12.5	6,000
1955	9,800	28.0	274,600	700	11.0	7,700
1956	7,800	37.9	295,700	800	9.0	7,200
1957	5,200	45.6	236,900	150	19.5	2,920
1958	11,300	28.0	316,800	180	13.0	2,340
1959	10,700	36.7	392,900	280	22.5	6,300
1960	10,300	22.8	234,800	280	17.0	4,760
1961	11,500	37.2	427,300	150	13.5	2,025
1962	10,000	38.0	379,600	100	29.0	2,900

Source: Statistical Reporting Service, U.S.D.A.

### Barley

Barley ranks third in importance among small grains grown in Stevens County. Acreage has increased from 1,830 in 1939 to 10,000 in 1962. A peak year was reached in 1958 when barley was harvested from 11,300 acres. When grain farmers accepted wheat acreage allotment quotas, barley was usually sown on land taken out of wheat. Over 400 farms reported having barley in 1959. Barley is grown mainly in the Colville Valley but is also found in the northern and southern agricultural areas of the county. It is primarily harvested for livestock feed and for seed.

### Rye

Rye has occupied the position of a secondary grain crop for many years in Stevens County. In 1962, only 100 acres were grown which produced 2,900 bushels. It is harvested mainly for livestock feed and is often cut green for hay. Rye is grown in the lower Colville Valley and in the southwestern part of the county near Hunters. This grain is suited to the colder climates of the higher areas and to some of the glacial soils of the county.

### Potatoes

Potatoes have been a minor commercial crop since pioneer days of Stevens County. Census figures show a large drop in potato growing since 1920 when over 2,000 acres were harvested. In 1920, there were over 1,500 farms raising potatoes in their gardens or in commercial fields. By 1959, only 418 farms were growing potatoes largely for use on the farm. In 1962, potato acreage for the county was estimated at 60 with a production of 240 tons. The central Colville Valley between Chewelah and Colville is the main potato area of the county. Stevens County farmers have found it difficult to compete with the large-scale potato growers of the irrigated Columbia Basin and elsewhere.

Table 19. Potatoes: Acreage, Yield and Production  
Stevens County, 1949-1962

Year	Potatoes		
	Harvested Acres	Yield (Tons Per Acre)	Production (tons)
1949	275	5.00	1,375
1950	150	4.67	700
1951	125	5.00	625
1952	90	4.00	360
1953	95	4.28	385
1954	300	3.33	1,350
1955	250	7.20	1,800
1956	100	8.00	800
1957	200	5.00	1,000
1958	200	3.95	790
1959	85	5.30	450
1960	70	5.29	370
1961	70	4.00	280
1962	60	4.00	240

Source: Statistical Reporting Service, U.S.D.A.

Tree Fruits and Grapes

According to the Census of Agriculture, the acreage of orchards and vineyards in Stevens County has steadily decreased since 1945 when there were 846 acres of orchard. In 1959, 94 farms reported a total of only 235 acres devoted to tree fruits and grapes in the county. Apples, peaches and cherries were the predominant fruits harvested. Many farms have small plantings of fruit trees where the production is for home use only. Most fruit orchards in the county are located in the northern part of the Colville Valley surrounding the towns of Marcus, Kettle Falls and Colville. Small plantings are also found on the slopes of the river valleys elsewhere in the county. Several factors have discouraged large scale commercial production of fruit in the region. These include a short growing season, lack of extensive irrigation and remoteness from fruit marketing centers.

Table 20. Tree Fruits and Grapes: Number of Farms Reporting, Trees and Vines of Bearing Age and Production  
Stevens County, 1959 1/

Fruit	Number of Farms Reporting	Number of Trees or Vines of Bearing Age	Production
Apples	92	3,103	12,388 loose boxes
Peaches	55	1,705	49.4 tons
Bartlett pears	69	248	32.0 tons
Other pears	40	82	4.0 tons
Grapes	28	181	1.1 tons
Plums and Prunes	69	265	13.0 tons
Sour cherries	53	101	1.1 tons
Sweet cherries	64	1,220	30.9 tons
Apricots	57	411	16.8 tons

1/ Farms with less than 20 fruit trees or vines were not enumerated.

Source: U. S. Census of Agriculture, 1959.

Field Corn

Field corn production in Stevens County has virtually disappeared. In earlier years, it was grown for both grain and silage. Over 1,000 acres were harvested annually prior to 1940. The decline in this crop is related in large part to the decreased interest in the local raising of hogs for commercial markets.

Other Crops: Field Seed, Vegetables, Berries and Nursery Products

The Census of Agriculture data reveal that only 36 acres of Stevens County's cropland was devoted to field seed crops in 1959. A total of 8,058 pounds of alfalfa, red fescue and wheatgrass seed were produced during the year. This represented an increase from the 1,100 pounds of alfalfa and wheatgrass seed which were reported harvested in 1954.

Commercial production of vegetables is minor in Stevens County. In 1959, 1,011 farms reported growing vegetables for home use compared with only 18 which reported vegetables harvested for sale. Only 14 acres were devoted to vegetables for sale off the farm. Vegetable acreage in the county has decreased considerably



since the 1930's when there were over 300 acres harvested for sale. The main drawbacks to commercial vegetable growing in the area is its short growing season and distance from population centers.

Stevens County's berry acreage has likewise decreased over the years to nominal levels. Only 5 acres of strawberries and 3 acres of raspberries were reported in the county in 1959.

In 1959, only 2 farms in Stevens County sold nursery and greenhouse products valued at over \$2,000. Cut flowers, potted plants, florist greens and breeding plants were the major products grown for sale. Total sales of nursery products off the farm in the county in 1959 amounted to \$35,856.

Table 21. Number of Farms, Land in Farms and Value of Livestock and Crops Sold Off Farms, Washington Counties - 1959

County	Number of Farms	All Land in Farms (acres)	Value of all Crops Sold Off Farms (dollars)	Value of all Livestock and their Products Sold Off Farms (dollars)
Adams	786	1,076,960	21,055,532	3,547,300
Asotin	325	364,405	2,589,582	1,179,464
Benton	1,281	562,809	12,912,165	3,958,996
Chelan	1,636	215,646	16,877,563	660,083
Clallam	724	68,739	706,055	2,858,512
Clark	2,778	188,479	3,020,725	8,222,499
Columbia	333	359,134	9,778,027	1,148,786
Cowlitz	1,014	80,176	1,022,291	2,808,884
Douglas	935	1,012,561	12,985,276	1,067,743
Ferry	283	298,247	396,384	931,057
Franklin	742	590,027	10,305,160	3,596,711
Garfield	274	344,094	6,871,789	898,109
Grant	1,497	1,075,642	26,083,038	12,555,694
Grays Harbor	896	99,529	924,067	2,639,777
Island	493	38,702	515,863	1,909,572
Jefferson	266	35,123	212,568	758,107
King	2,952	114,719	6,240,212	14,298,190
Kitsap	906	29,776	437,819	1,374,547
Kittitas	905	580,035	2,961,833	10,945,370
Klickitat	741	960,614	3,859,102	3,083,797
Lewis	2,230	255,012	1,893,636	7,935,581
Lincoln	959	1,422,981	21,035,259	3,253,383
Mason	328	35,518	202,594	728,250
Okanogan	1,762	2,048,406	10,681,584	5,723,537
Pacific	499	53,348	819,224	1,086,617
Pend Oreille	366	124,239	265,001	1,222,488
Pierce	2,535	153,363	4,928,685	10,850,000
San Juan	209	45,707	91,694	595,403
Skagit	1,740	141,770	6,722,958	9,167,984
Skamania	177	20,177	283,595	259,736
Snohomish	2,919	148,604	2,788,695	12,899,240
Spokane	2,990	822,008	15,091,158	8,403,816
STEVENS	1,608	803,776	3,836,457	5,676,015
Thurston	1,220	142,170	1,952,408	5,836,930
Wahkiakum	302	26,299	174,415	1,052,642
Walla Walla	981	822,729	19,957,499	4,228,801
Whatcom	3,151	185,045	3,943,630	17,706,625
Whitman	1,824	1,485,709	43,632,434	7,398,484
Yakima	6,010	1,884,694	75,760,207	32,919,536
State Total	51,577	18,716,972	353,816,184	215,388,266

Source: U. S. Census of Agriculture, 1959.